Amendments to the Drawings:

The attached replacement sheets of drawings include changes to FIGS. 1B, 3A-3C, 4A-4F, 5A-5E, 6A-6F, 7A-7E, 8A-8B, 9 and 10A-10B and replace the original sheets including FIGS. 1A-1B, 2, 3A-3C, 4A-4F, 5A-5E, 6A-6F, 7A-7E, 8A-8B, 9 and 10A-10B.

FIGS. 1B, 3A-3C, 4A-4F, 5A-5E, 6A-6F, 7A-7E, 8A-8B, 9 and 10A-10B are amended to show hatching.

FIGS. 10A-10B are amended to include the label "Prior Art."

Attachments following last page of this Amendment:

Replacement Sheet (10 pages)

REMARKS

Claims 2 and 16-18 are pending for further examination. Claims 4 and 5 are canceled. Claims 16-18 are new. Claims 1, 3 and 6-15 are withdrawn as a result of a previous restriction requirement.

Priority

Applicant thanks the Office for acknowledging Applicant's claim for foreign priority (based on an application filed in Japan on February 24, 2004) and for informing the Applicant that a certified copy of the Japanese application was not filed. Applicant notes that a request to retrieve the priority application electronically was filed on June 29, 2009 and that the USPTO's Patent Application Information Retrieval (PAIR) system indicates the certified document was retrieved on July 28, 2009.

Drawings

The Office action objected to FIGS. 10A-10B for failing to include the label "Prior Art." Applicant has amended FIGS. 10A-10B to include the label "Prior Art." Accordingly, Applicant respectfully request withdrawal of the objection.

The Office action also objected to the drawings for failing to show hatching of parts shown in section. Applicant has amended the figures to show the hatching, as required by the Office action and respectfully requests withdrawal of the objection.

Replacement sheets including the amended figures are attached following the last page of this amendment.

Claim Rejections

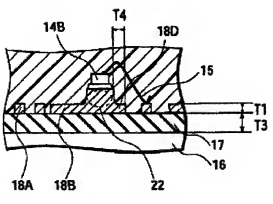
Claims 2 and 4 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by the Tsunoda patent (U.S. Patent No. 5,384,683). Claims 2 and 4-5 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over the Takeuchi patent (U.S. Patent No. 6,718,631) in view of the Nakamara reference (U.S. Patent App. Pub. No. 2003/0141596).

Claim 2 is currently amended to incorporate the features of claims 4 and 5, rendering the rejection of claims 4 and 5 moot. In view of the foregoing amendments and the following remarks, Applicant respectfully requests reconsideration and withdrawal of the remaining claim rejections.

Claim 2 recites a circuit device that includes an insulating layer on a front surface of a circuit substrate and conductive patterns on the insulating layer, in which the conductive patterns include a first conductive pattern and a second conductive pattern. A "protruding portion" is formed on and protrudes, in a thickness direction, from a front surface of the second conductive pattern. The protruding portion is "integrally formed with the second conductive pattern in a single body." An edge portion of the second conductive pattern is formed around the protruding portion and has a thickness that is substantially equal to the thickness of the first conductive pattern and a width larger than the thickness of the first conductive pattern.

An example of those features is shown in FIG. 3B (reproduced below) of the present application. In that example, a hybrid integrated circuit device includes an insulating layer 17 formed on a substrate 16, and a first conductive pattern 18A and second conductive pattern 18B formed on the insulating layer 17. The second conductive pattern 18B includes a protruding portion 22, in which the portion 22 extends upward from a front surface of the second conductive pattern. The second conductive pattern 18B also includes an edge portion 18D surrounding the protruding portion 22, in which the edge portion 18D has a width T4 that is larger than the thickness of the first conductive pattern 18A and a thickness T1 that is substantially equal to the thickness of the first conductive pattern 18A (*see* ¶¶ [0082]-[0084]). By forming the protruding portion 22 on the second conductive pattern 18B, the overall thickness of the second conductive pattern in that area is increased. Accordingly, the increased thickness allows, in some implementations, the second conductive pattern to handle greater levels of current flow.

FIG.3B



In contrast, none of the cited references, alone or in combination, discloses or renders obvious the subject matter of pending claim 2. The Tsunoda patent discloses a power device module that includes a metal base 1, an insulating layer 22 on the metal base 1 and wiring patterns 3, 35 on the insulating layer 22. A power semiconductor device 4 is mounted on a heat spreader 9, which, in turn, is mounted on the wiring pattern 3 (*see* FIGS. 1A-1B). The heat spreader 9 (which the Office action alleges corresponds to the claimed "protruding portion") is not, however, "integrally formed" with a second conductive pattern in "a single body," as recited in pending claim 2. Instead, the Tsunoda patent clearly shows that the heat spreader 9 is a separate and distinct component from the wiring pattern 3. Nor does the Tsunoda patent disclose any reason to form the heat spreader 9 integrally in a single body with the wiring pattern 3.

The Takeuchi patent discloses a flexible wiring board 70 that includes a first wiring film 71 and a second wiring film 72 formed on a first resin film 76, in which the first wiring film 71 is formed thicker than the second wiring film 72 (*see* FIG. 7). The Examiner acknowledges that the Takeuchi patent fails to disclose "circuit elements electrically connected to" conductive patterns, as recited in pending claim 2, but relies on the Nakamura et al. reference for that feature. The Nakamura et al. reference discloses a semiconductor device that includes an insulating base 10 on which semiconductor elements 2 are formed (*see* FIG. 22).

Neither the Takeuchi patent nor the Nakamura et al. reference, however, discloses or renders obvious a circuit device that includes a circuit substrate which is metal, as further recited in pending claim 2. Instead, as shown in FIG. 7 of the Takeuchi patent, the first and second wiring films are formed on a resin film 76. Similarly, the base 10 of the Nakamura et al. reference is formed from an insulating resin (*see* ¶ [0088]). Nor would there have been any reason to include a metal circuit substrate.

The Office action also alleges that the first wiring film 71 of the Takeuchi patent corresponds to the claimed "second conductive pattern" and that the portion of the first wiring film 71 which extends into the resin film 76 corresponds to the claimed "protruding portion." The Office action concedes there is no disclosure in the Takeuchi patent that the first wiring film 71 includes an "edge portion" having a width "larger than the thickness of [a] first conductive

pattern," as recited in the pending claims. The Office action alleges, however, that the width of the edge portion depends upon the "process of manufacturing the pattern and the thickness of the pattern" and, therefore, it would have been obvious to one of ordinary skill in the art to increase the width of the edge portion "in order to have desired size of the protruding portion." Applicant respectfully disagrees and submits that it would not have been obvious to increase the width of an edge portion in order to change the size of a protruding portion.

As shown in FIGS. 1c and 2f (reproduced below) of the Takeuchi patent, the width of the first wiring film 71 (and thus the width of the region that the Office action alleges corresponds to the claimed "edge portion") is determined by the size of the resist layer 18b formed on the surface of the metal foil 11 (*see* FIG. 2f). Accordingly, the width of the first wiring film 71 does not depend on the thickness of the metal foil 11, as alleged by the Office action. Instead, it is determined solely by the size of the resist pattern 18b. Furthermore, the size of the thicker portion 11a, which the Office action alleges corresponds to the claimed "protruding portion," is determined by resist layer 15 (see FIG. 1c) and is *not* affected by the width of the first wiring film 71. Accordingly, it would not have made any sense for one of ordinary skill to modify a width of the first wiring film 71 in order to change the size of the thicker portion 11a given that such a modification would not have any effect on the size of the thicker portion 11a.

Fig. 2f

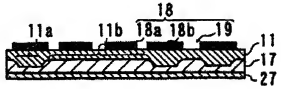
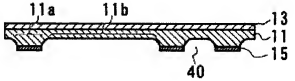


Fig. 1c



At least for the foregoing reasons, independent claim 2 should be allowed. Claims 16-18 depend from claim 2 and should be allowed for at least the same reasons.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

No fee is believed due. However, please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 9/9/09

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